

# METHOD AND APPARATUS FOR AMPLITUDE FILTERING IN THE FREQUENCY PLANE OF A LITHOGRAPHIC PROJECTION SYSTEM

## Abstract

A method of projecting a pattern from a mask onto a substrate comprises providing an energy source, a substrate, and a mask containing a pattern of features to be projected onto the substrate, and projecting an energy beam from the energy source through the mask toward the substrate to create a projected mask pattern image. The projected mask pattern image is created by zeroth and higher orders of the energy beam. The method then includes diffracting zeroth order beams of the projected mask pattern image to an extent that prevents the zeroth order beams from reaching the substrate, while permitting higher order beams of the projected mask pattern image to reach the substrate. Preferably, the zeroth order beams of the projected mask pattern image are diffracted at an obtuse angle.